

(No Model.)

A. S. WARD & G. W. RICHAR.  
CAR COUPLING.

No. 581,895.

Patented May 4, 1897.

Fig. 1.

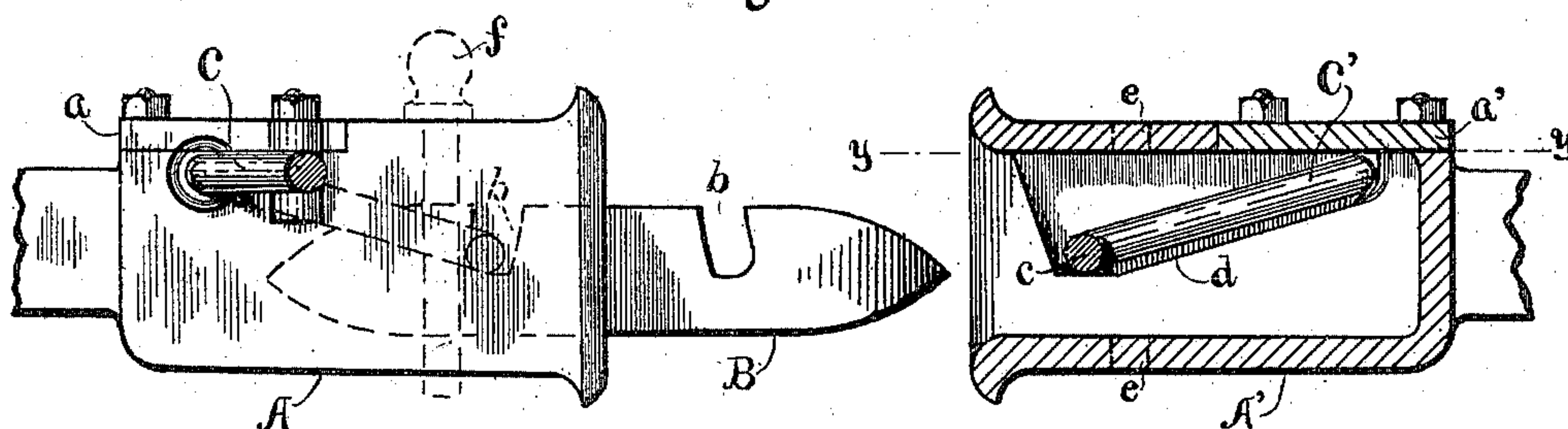
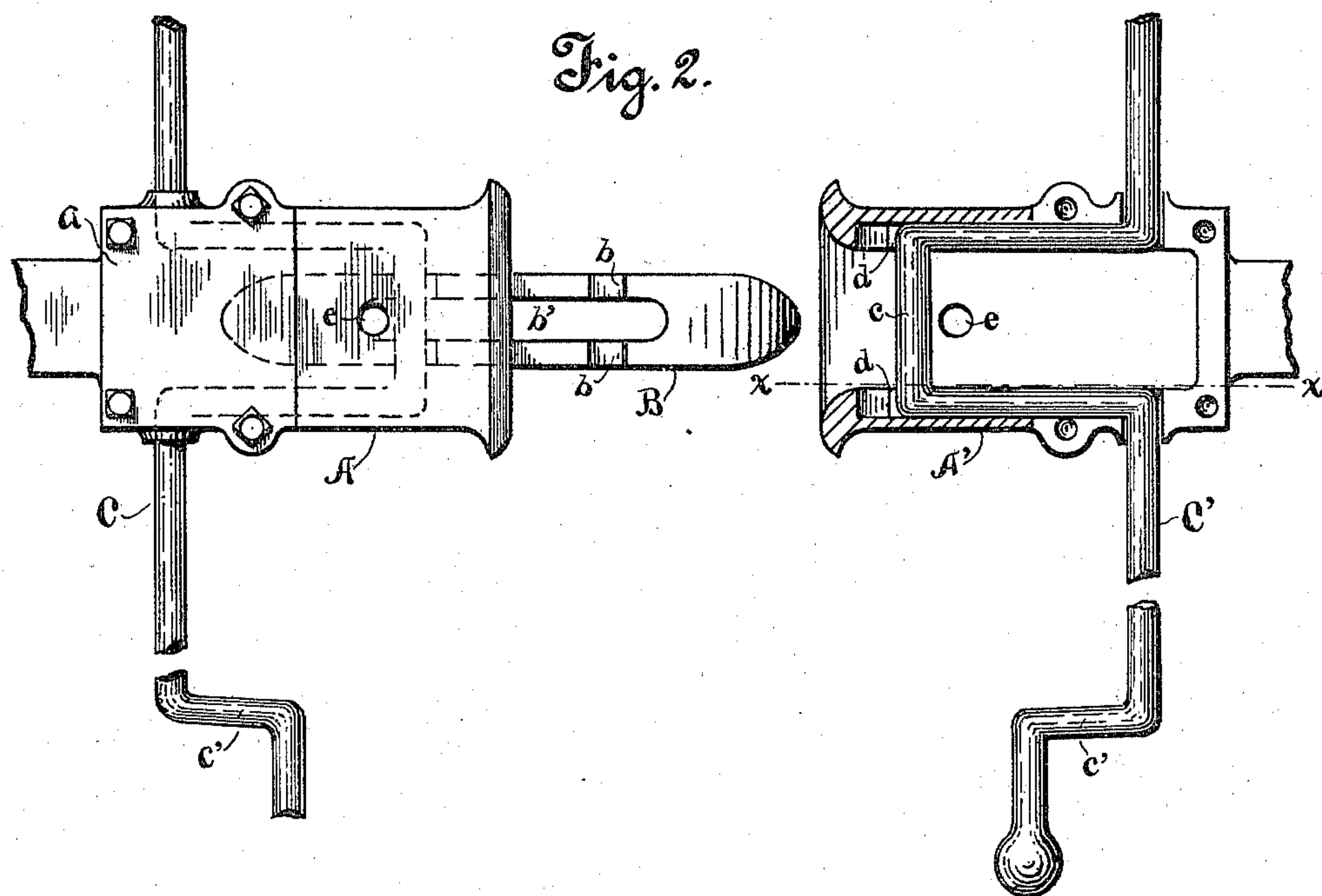


Fig. 2.



Witnesses  
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# UNITED STATES PATENT OFFICE.

ALBERT S. WARD AND GEORGE W. RICHAR, OF VAN ETEN, NEW YORK.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 581,895, dated May 4, 1897.

Application filed December 10, 1896. Serial No. 615,219. (No model.)

*To all whom it may concern:*

Be it known that we, ALBERT S. WARD and GEORGE W. RICHAR, citizens of the United States, residing at Van Etten, in the county of Chemung and State of New York, have invented certain new and useful Improvements in Automatic Car-Couplings, of which the following is a specification.

Our invention relates to improvements in car-couplings in which a link projecting from one draw-head is automatically coupled to another draw-head when the cars carrying the respective draw-heads are pushed together, and uncoupled from either draw-head without requiring the operator to enter between the cars; and the objects of our improvements are, first, to provide a simple, cheap, and reliable coupling, and, second, to so construct the draw-heads and links that cars provided with our device may be readily coupled to others provided with different forms of couplings. We attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of our coupling, one draw-head being shown in section on the line  $x x$  in Fig. 2; and Fig. 2, a top view of the coupling, one draw-head being shown in section on the line  $y y$  in Fig. 1.

Similar letters refer to similar parts throughout both views.

A A' are the draw-heads, and B the link. The draw-heads are provided internally with the hinged bails C C', which have arms extending out to either side of the cars, where they are furnished with cranks  $c' c'$  for operating the bails by hand to release the link and uncouple the cars. A covering-plate  $a a'$  is provided at the rear portion of each draw-head, whereby the bails may be inserted and removed for purposes of renewal or repair. An inclined ledge  $d$  is provided on the inside of the cheeks of each draw-head, upon which the sides of the bails rest and are held in proper position. The link B is provided with two grooves or notches cut across it at  $b b$ , and with a longitudinal slot  $b'$ , the ends of the link being pointed, as shown. Vertical holes  $e e$  are drilled through the draw-heads in order that coupling-pins, as indicated by broken lines at  $f$ , may be used when coup-

ling to a car not provided with our draw-heads.

In operation, the link B having first been placed in position in draw-head A, when the cars come together the point of the link B enters draw-head A' beneath the cross-bar  $c$  of the bail C', lifting the bail until  $c$  drops into notch  $b$ , when the cars become securely coupled together. The notches are cut with a slight inclination, as shown, so that the bails cannot be thrown up and release the link when the cars are in motion. The bails drop into place from their own weight, and this may be assisted by weight-knobs on the cranks  $c' c'$ . There are no springs to get out of order. When the cars are to be uncoupled, it is only necessary to step to the side of the car and raise one of the cranks  $c'$ . If it is desired to make a flying switch, one of the cranks may be held up by a suitably-located hook and chain hung from the car or other suitable device. (Not shown.) The notches in the link B are so located that when the lips of the draw-heads are brought together the cross-bars of the bails may readily drop into place or be lifted out, as the case may be. The side pieces of the bails are let into the inside cheeks of the draw-heads, so that they cannot hinder the cross-bars  $c$  from dropping into the link-notches, and the ledge  $d$  thus formed holds the bail in proper position for the link to enter beneath it.

When coupling to cars provided with other draw-heads than ours, the link B may be used as an ordinary link, the slot  $b'$  being adapted to receive a pin in the other draw-head, or other forms of link than ours may be used by dropping coupling-pins through holes  $e e$ , provided therefor in our draw-heads. Proper allowance is also made for side motion when the cars are running around curves, and it is not essential that the two draw-heads shall be on the same level.

We are aware that we are not the first to use the slotted and notched link, and we do not claim this as our invention.

What we claim, and desire to secure by Letters Patent, is—

1. In a car-coupling, the combination, with a draw-head, of an internal bail adapted to swing vertically within the draw-head, re-

cesses in the sides of the draw-head within which the sides of the bail operate, and ledges formed below the recesses for the purpose set forth.

- 5    2. In a car-coupling, the combination, with a draw-head, of an internal bail adapted to swing vertically within the draw-head in the manner described, said bail being formed of a single bar of metal and having its ends bent  
3 outward through the sides of the draw-head whence they extend to the sides of the car where they are bent to form cranks, substantially as described.

3. In a car-coupling, the combination with a notched link, of draw-heads provided with 15 internal bails adapted to swing vertically, and means for lifting the bails to release the link, substantially as described.

In testimony whereof we have affixed our signatures in presence of two witnesses.

ALBERT S. WARD.

GEORGE W. RICHAR.

Witnesses:

H. H. MILLS,

EUGENE DIVEN.